

### REMARKS

Claim 1, 2, and 4-16 are present in the application. Base claims 1 and 9 have been amended to more clearly set forth the subject matter described in the application. Based on revisions made in claims 1 and 9, dependent claims 12 and 14 have been amended to adjust for antecedent basis. New claims 15 and 16 have been added.

Claim 15 requires the parallel contact pins to be fully located within said connector. The requirement of being "fully located within" is taken from textual passages canceled from claim 1. An exemplary embodiment of the feature of claim 15 can be seen in Figures 2a, 2d, and 3.

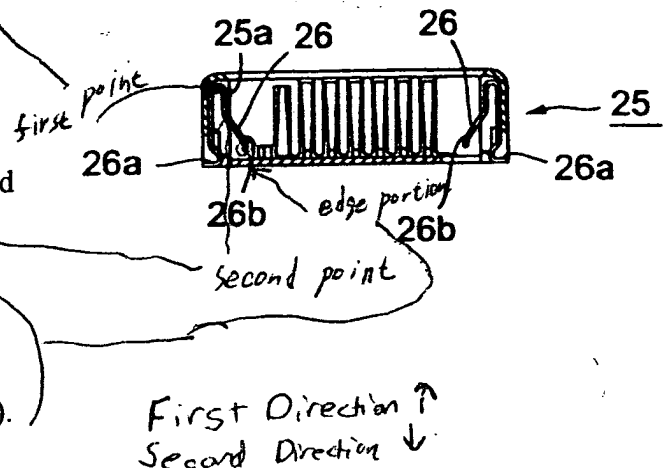
Claim 16 requires that the notches in the plate to form openings. This is best seen in Figure 2a of the application. Further, page 8, lines 25-26 indicates "Four sides portion of a bottom 25b of the chamber 25a are suitably notched to form openings 25c".

With respect to claims 1 and 9, the Examiner's attention is drawn to the exemplary embodiment shown in Figure 2d of the application, which is presented below with notations thereon which refer to the language now used in the claims. As can be seen from Figure 2d, each of the parallel contact pins

are bent from a second direction opposed to the first direction at a first point, and

extended from the first point and bent so as to extend in the chamber at a second point, and

extended from the second point to an edge portion to be brought into contact with the first conductive member (on the module body).



Claims 1, 2, 5-12 and 14 have been rejected as being obvious over U.S. Patent 4,934,944 to Kozel in view of U.S. Patent 4,934,944 to Walburn. Based on statements made on page 5 of the office action, this response addresses this rejection as being applicable to claim 13. Claim 4 has been rejected as being obvious over a combination of Kozel and Walburn in further view of U.S. Patent 6,268,882 to Elberbaum. These rejections are traversed in view of the amendments above and remarks below.

Both Walburn and Elberbaum are newly cited in the last office action. It appears that there is some confusion on the language “generally inverted V shape”; therefore, base claims 1 and 9 have been amended to specifically recite the orientation and portions of the parallel pins in a manner reflective of what is shown in the exemplary embodiment of Figure 2d of the application (it being understood that all variations on these recited features are covered by the claims)..

None of the references of record, and particularly Kozel, Walburn and Elberbaum, show or suggest wherein each of the parallel contact pins is bent from a second direction opposed to the first direction to the first direction at a first point, and extended from the first point and bent so as to extend into the chamber at a second point, and extended from the second point to an edge portion to be brought into contact with the first conductive member.

As such, no combination of the references would make this feature obvious.

In particular, with reference to Kozel at Figures 2 and 3, one might interpret “48” and “46” as a first point and a second point, respectively; however, in Kozel the edge portion is NOT brought into contact with the first conductive member in a case where the module body is plenary accommodated in the chamber. Instead, in Kozel, a part “25” is brought into contact with the conductive member of the module, not an edge portion. In short, Kozel does not have the compact and thinner design afforded by the configuration of the present invention as discussed on page 9, lines 23-29 of the application. Likewise, with reference to Figures 3 and 4 of Walburn, it can be seen that the contact is formed into a C-shaped

configuration and is obviously different from requirement of having a portion extended from the second point to an edge portion to be brought into contact with the first conductive member. With reference to Figure 9a of Elberbaum, it can be seen that the electrical contacts 4a in the base 61 are similar to that shown in Walburn and do not include a portion extended from the second point to an edge portion to be brought into contact with the first conductive member.

The claimed invention, as it was discussed previously, provides a connector which is able to achieve a thinner, space-saving design compared to existing constructions and exhibits a more stable connection. In addition, the claimed structure has an advantage that the force, exerted in the direction of insertion of the module body, is not applied directly to the contact pins, thus reducing a possibility of contact pins damage.

As it was discussed previously, the patent to Kozel et al. discloses a chip carrier socket 10 with open aperture which defines and surrounds a space for receiving a chip carrier 20. A plurality of elongated contacts 25 are carried by the frame, and a chip carrier also has contacts 26. When a chip carrier 20 is inserted into the frame, the resilience provided between the connection of contacts 25 and 26 is such that bent contact 25 is pressed into contact 26. The shape of frame contacts 25 and a chip carrier contacts 26 is shown in Figure 2 and 3 of the Kozel et al. The frame contact 25 is an elongated contact specifically made of convoluted, linear metal strips which resides in slots separated by inner plastic ribs 23. The chip carrier contacts 26 are also a convoluted linear metal strip which comes into contact with a frame contact 25.

The Examiner agreed that the reference to Kozel et al. does not show “ the second conductive member comprising a plurality of parallel contact pins bent generally inverted V-shape extending to the outer side face so as to be able to be connected to an external line at the outer side face”. The Examiner relies on newly cited patent to Walburn as showing this structure. The Applicant respectfully disagrees. In addition, as noted in detail above, claims 1 and 9 have been amended to require

wherein each of the parallel contact pins is bent from a second direction opposed to the first direction to the first direction at a first point, and extended from the first point and bent so as to extend into the chamber at a second point, and extended from the second point to an edge portion to be brought into contact with the first conductive member.

The Examiner states on page 2 of the Office Action that, “Walburn discloses a second conductive member comprising a plurality of parallel contact pins bent into a “generally” inverted V-shape extending to the outer side face so as to be connected to an external line at the outer side face.” This is not correct. Walburn describes his connector the following way, “An electronic connector (20) includes fine wires (44) adhesively bound to an insulating film (42) to form a contact strip (40) inelastically formed into a generally C-shaped configuration to provide an electrical inter-connection between the contact pads (14) of printed circuit board (12) and the contact pads (54) of an electrical component (52).” (See Abstract)

Further, specifically referring to Figures 1 and 4 of Walburn, a contact strip 40 is shown. As can be seen from the above description and from the illustration in Figure 4, Walburn’s contact strip 40 has nothing to do with the claimed contact pins shown by the Applicant. First, the contact strip 40 of Walburn has a different shape and comprises a whole structure of a group of wires completely glued to insulation film. Additionally, paraphrasing the Applicant’s claim, the Examiner does not refer precisely to any particular structure in Walburn as a pin analogous to the claimed one. It can be assumed that the Examiner implies a single wire 44 as an individual pin or a like. The Applicant respectfully submits that in this regard the rejection is not accurate since it appears that the Examiner does not recognize the fact that Walburn does not show the individual pins but a whole structure wherein all wires 44 are adhered to an insulation film and functionally act differently versus the claimed plurality of pins. Additionally, the connection of Walburn’s strip to the body of a connector is very different. Specifically, referring to Figure 2 in Walburn, contact strip 40 is inserted into contact receiving section 27

by inserting first end 45 of contact strip 40 through slot 28 from the bottom of the housing 21 when the contact strip 40 is fully inserted the curved portion thereof is held between protrusion 30 and slot wall 31 of base 22. The leading end 45 of contact strip 40 extends to the upper end of contact receiving section 27 such that plated area 46 lies within cavity 32 of housing 21 and plated area 48 lies along bottom surface 25b of housing 21 with second strip end 47 lying within housing wall recess 29. Making the rejection, the Examiner tries to combine the socket shown by Kozel et al. with Walburn. Since in the rejection the Examiner just paraphrases the Applicant's claim, it is hard to figure out which part of Walburn is a "plurality of parallel contact pins bent into an inverted V-shape", because Walburn does not show V-shape pins at all but shows C-shape wires glued into the insulating film. Also, as it was discussed above, the connection of housing and connectors is very specific in the claimed invention. The combination of Walburn and Kozak et al., proposed by the Examiner, would not be a workable structure due to modifications that would be required for the housing and an insertable part of the connector. The Examiner relies on *In re Japikse*, 86 USPQ 70, stating that "It would have been obvious to one having ordinary skill in the art to modify the connection structure of Kozel et al. to include the second conductive member with a plurality of parallel contact pins bent into a "generally" inverted v-shape extending to the outer side face instead of from the inner face as taught by Walburn, since it has been held that rearranging parts of an invention involves only routine skill in the art." (Pages 2-3 of the Office Action) The Applicant argues there is not a clear motivation to modify Kozel et al. with connection strips of Walburn and believes that this modification will produce a functionable device. Additionally, it is respectfully requested that the Examiner particularly show which element of Walburn is considered as a structure analogous to the claimed contact pin.

The Examiner relied on patent to Elberbaum as disclosing a module body as being a camera.

The patent to Elberbaum shows a television camera apparatus for

surveillance applications. Structurally, the Elberbaum's camera has a base plate to be attached to a supporting structure, a camera holder fixed to the base plate and a camera body protruding from the camera holder. The Examiner specifically refers to Figure 9A of Elberbaum as showing connection of a camera module body to a supporting structure. However, the purpose of the Elberbaum's apparatus is surveillance, and the apparatus provides a connection which allows a module camera body to be rotatable about center axis. Please note that the rejected claim 4 directly depends from claim 1 which is distinguishable over the prior art relied on by the Examiner. The patent to Elberbaum does not make up to the deficiencies of Kozel et al. and Walburn, and the Elberbaum's camera by itself is unrelated to the claimed invention. Therefore, it is respectfully submitted that the rejection of claim 4 is without merits and should be withdrawn.

In view of the foregoing, it is respectfully requested that the application be reconsidered, and that claims 1, 2 and 4-16 be allowed at an early date.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041 (Whitham, Curtis & Christofferson, P.C).

Respectfully submitted,



Michael E. Whitham  
Reg. No. 32,635

Whitham, Curtis & Christofferson, P.C.  
11491 Sunset Hills Road, Suite 340  
Reston, VA 20190  
Tel. (703) 787-9400  
Fax. (703) 787-7557

Customer No.: 30 743